

Figures

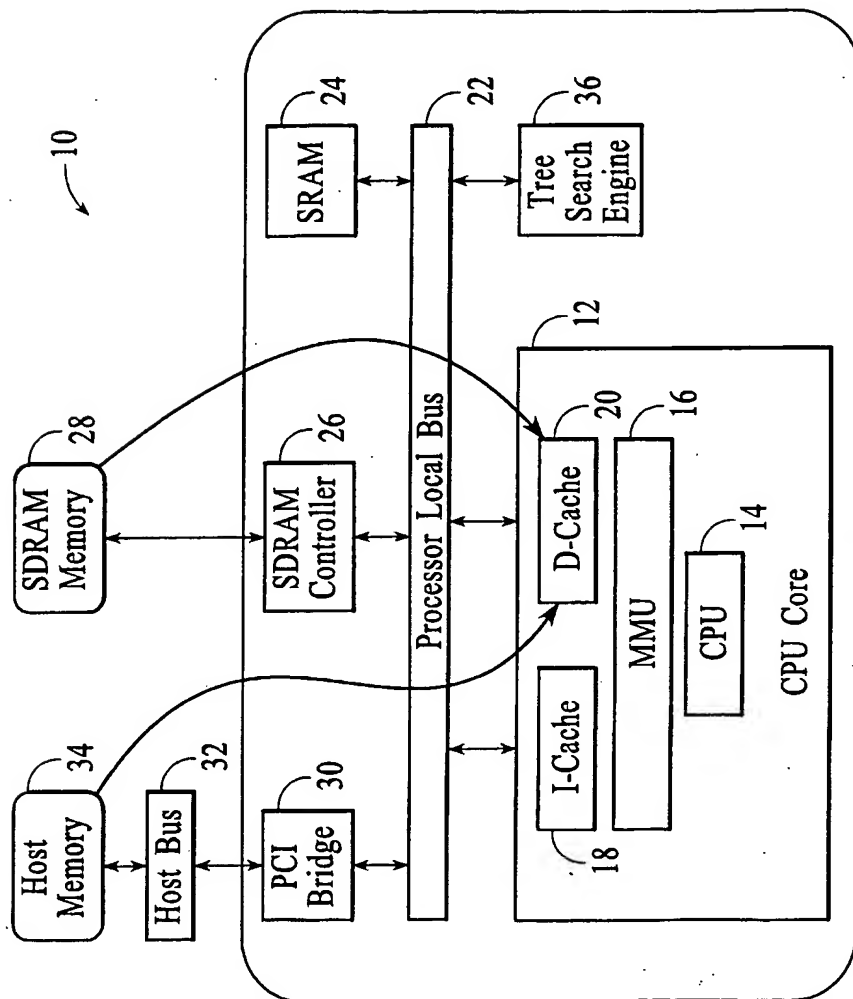


FIG. 1

Optimization of FM/SM Group Size based on 12 Level Tree

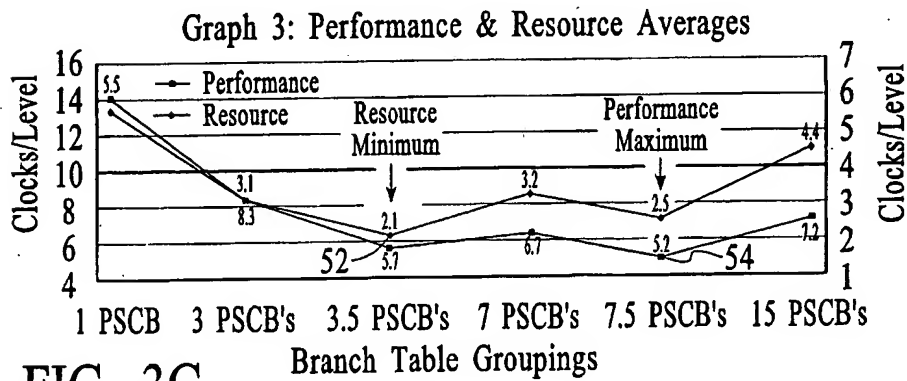
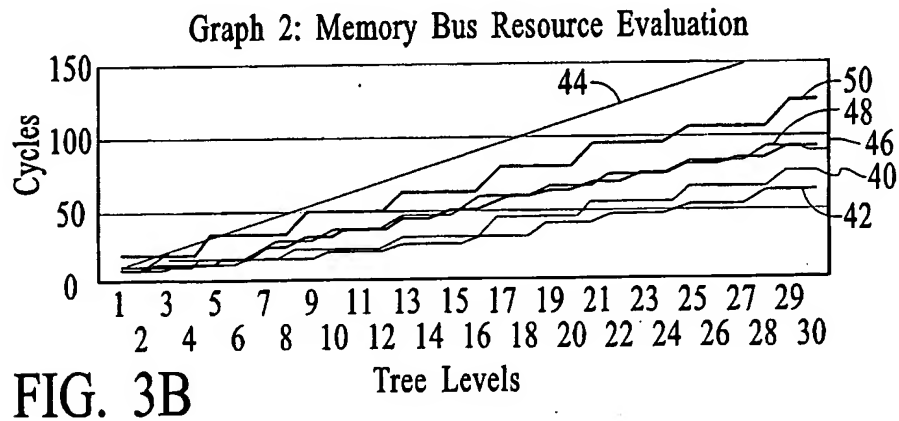
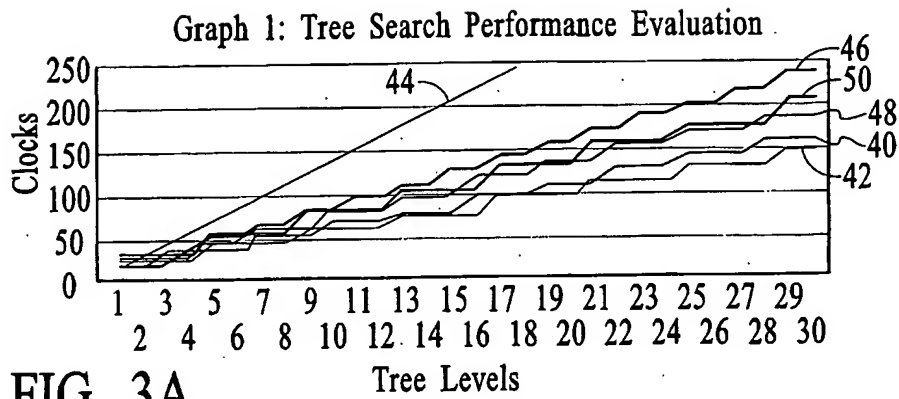
Reference Size (table size)	Levels/ Reference	Latency/ Reference	Tree Eff.	Tree Search Performance	BusTime/ Reference	Bus Eff.	Memory Bus Resource
1 PSCB (2x4 byte block)	1 level (12 ref.)	14 clocks avg.	7%	168 clocks avg.	5.5 cycles avg.	9%	66 cycles avg.
3 PSCB's (24 byte block)	2 levels (6 ref.)	16 clocks avg.	13%	96 clocks avg.	6 cycles avg.	17%	36 cycles avg.
3.5 PSCB's (2x28 byte block)	3 levels (4 ref.)	16 clocks avg.	19%	64 clocks avg.	6 cycles avg.	25%	24 cycles avg.
7 PSCB's (56 byte block)	3 levels (4 ref.)	19 clocks avg.	16%	76 clocks avg.	9 cycles avg.	17%	36 cycles avg.
7.5 PSCB's (2x60 byte block)	4 levels (3 ref.)	19 clocks avg.	21%	57 clocks avg.	9 cycles avg.	22%	27 cycles avg.
15 PSCB's (120 byte block)	4 levels (3 ref.)	26 clocks	15%	78 clocks	16 cycles	13%	48 cycles

FIG. 2

Table 2. Optimization of LPM Group Size based on 12 Level Tree

Reference Size (table size)	Levels/ Reference	Latency/ Reference	Tree Eff.	Tree Search Performance	BusTime/ Reference	Bus Eff.	Memory Bus Resource
1 PSCB (2x7 byte block)	1 level (12 ref.)	14 clocks avg.	7%	168 clocks avg.	5.5 cycles avg.	16%	66 cycles avg.
1.5 PSCB's (2x21 byte block)	2 levels (6 ref.)	16 clocks avg.	13%	96 clocks avg.	6 cycles avg.	29%	36 cycles avg.
3.5 PSCB's (2x49 byte block)	3 levels (4 ref.)	19 clocks avg.	16%	76 clocks avg.	9 cycles avg.	29%	36 cycles avg.

FIG. 4



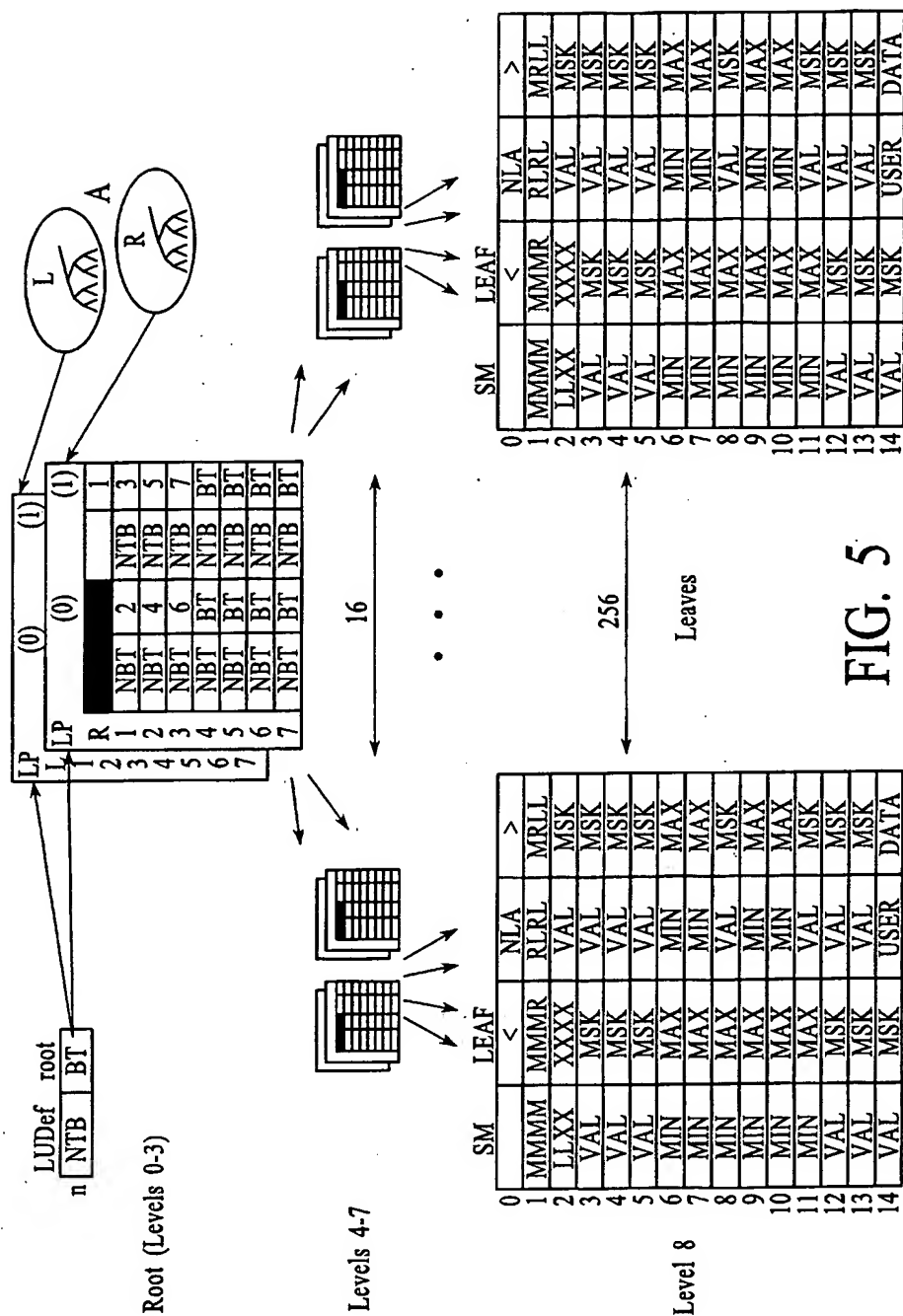


FIG. 5

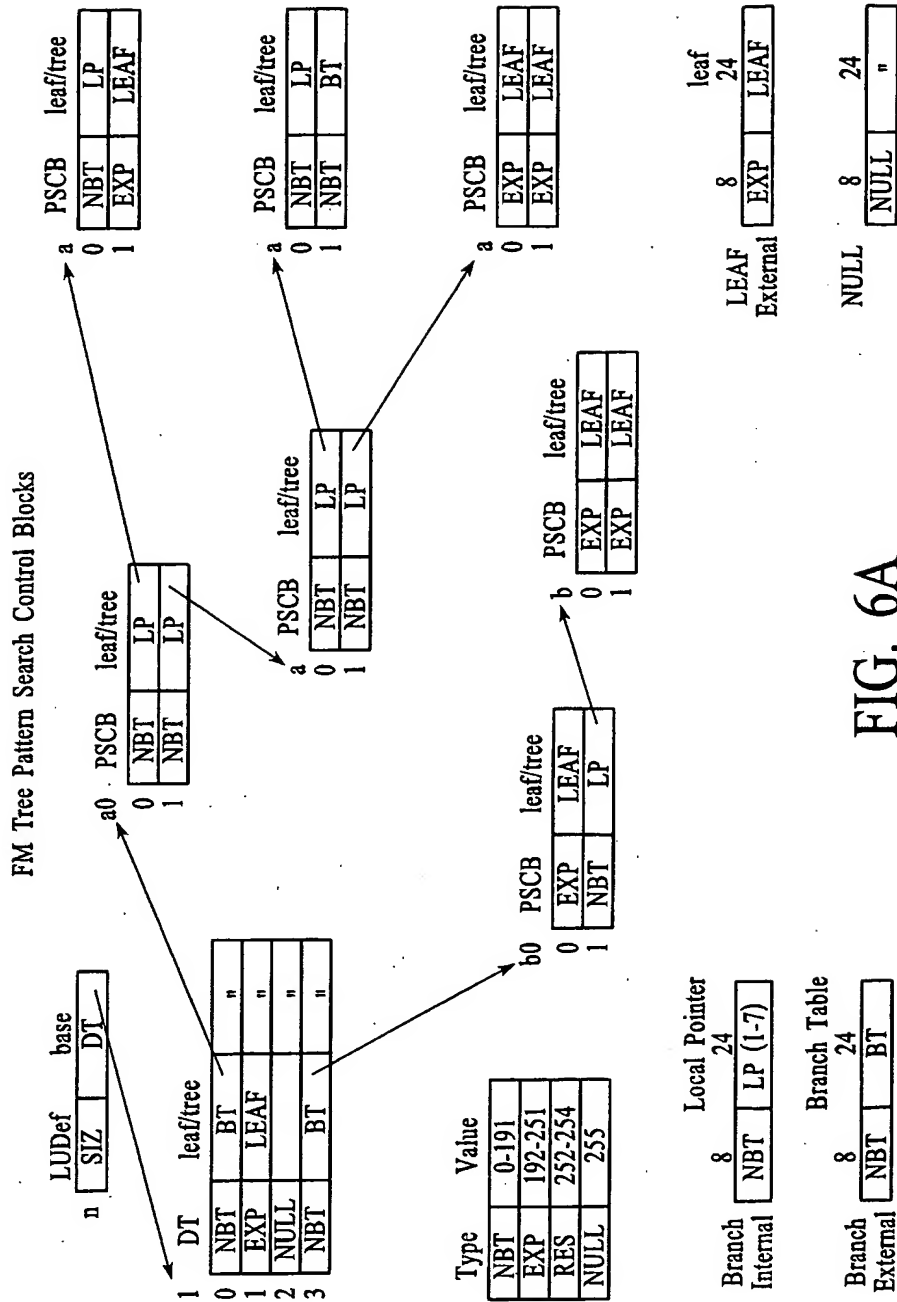


FIG. 6A

